Dolphin Technology

DOLPHIN TECHNOLOGY PRODUCT OFFERING
I/O

Dolphin Technology offers an extensive array of Interface IP, all of which has been optimized for ultra high performance across all processes supported. Our I/O portfolio includes: Standard I/O (General Purpose I/O or GPIO), Specialty I/O (bus-specific I/O), NAND Flash I/O and DDRx & LPDDRx I/O.

We specialize in Staggered, Inline and Flip Chip pads with aggressive pitch for the most demanding designs, whether pad or core limited. Plus, our I/O Compiler enables us to customize the entire library based on process-specific and chip-specific options.

GENERAL PURPOSE I/O	16nm FF+ FFC	28nm HP, HPx LP, ULP	40nm G, LP ULP	55nm GC, LP ULP, EF	65nm GP LP	80nm G GC	90nm G, GT EF
I/O drive strengths 2/4/6/8/10/12 mA	●	●	●	●	●	●	●
1.8V Xtrs, 1.8V output drive/3.3V Tolerant	●						
1.8V Xtrs, 1.8V/3.3V output drive Capable	●						
1.8V Xtrs, 1.8V output drive/2.5V/3.3V Tolerant		●	●	●	●	●	●
1.8V Xtrs, 1.8V/2.5V/3.3V output drive Capable		●	●	●	●	●	●
2.5V Xtrs, 2.5V output drive/3.3V Tolerant		●	●	●	●	●	●
2.5V Xtrs, 2.5V/3.3V output drive Capable		●	●	●	●	●	●

DDR I/O							
Configurable single-ended and differential I/O's	●	●	●	●	●	●	●
DDR4/3/2 & LPDDR3/2 I/O with PVT Compensation and PVT compensated internal termination RTT using 1.8V Xtrs	●	●					
DDR4/3/2 & LPDDR3/2 I/O with PVT Compensation and PVT compensated internal termination RTT using 2.5V Xtrs		●					
DDR3/2/1 & LPDDR2/1 I/O with PVT Compensation and PVT compensated internal termination RTT using 1.8V Xtrs			●	●	●	●	●
DDR3/2/1 & LPDDR2/1 I/O with PVT Compensation and PVT compensated internal termination RTT using 2.5V Xtrs			●	●	●	●	●

NAND FLASH I/O							
ONFI 4/3/2/1 and Toggle 2/1 NAND compliant	●	●	●	●	●		
Configurable single-ended and differential I/O's	●	●	●	●	●		
NAND Flash I/O with PVT Compensation and PVT compensated internal termination RTT using 1.8V Xtrs	●	●	●	●	●		
Drive capability up to 80pF	●	●	●	●	●		

SPECIAL PURPOSE I/O							
LVPECL I/O with PVT Compensation	●	●	●	●	●	●	●
LVDS/LVPECL Combo with PVT Compensation	●	●	●	●	●	●	●
PCI	●	●	●	●	●	●	●
I2C	●	●	●	●	●	●	●

I/O FEATURES							
Libraries include configurable I/O's, power cells, fillers, spacers, and analog or calibration cells	●	●	●	●	●	●	●
Pad design with 25um pitch	●	●	●	●	●	●	●
Supports wirebond/CUP and flipchip packages	●	●	●	●	●	●	●
Programmable metal stack options	●	●	●	●	●	●	●
4 different slew rate options	●	●	●	●	●	●	●
Built-in JTAG Logic for testability	●	●	●	●	●	●	●
Input/Output registers options	●	●	●	●	●	●	●
Bus-hold(sustain) and pull-up/pull-down options	●	●	●	●	●	●	●
Built-in ESD and Latchup Prevention circuits	●	●	●	●	●	●	●

Front End views are available under NDA. For more information, contact: sales@dolphin-ic.com

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